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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,003	12/19/2006	Philippe Krafft	291453US0PCT	7750
22850	7590	03/12/2010	EXAMINER	
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314			KEYS, ROSALYND ANN	
			ART UNIT	PAPER NUMBER
			1621	
			NOTIFICATION DATE	DELIVERY MODE
			03/12/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/580,003	Applicant(s) KRAFFT ET AL.	
	Examiner Rosalynd Keys	Art Unit 1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 77-96 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 77-96 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: ____. |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :8/18/06; 3/8/07; 6/7/07; 9/14/07; 10/10/07; 10/31/07; 3/5/08; 3/25/08; 4/4/08; 5/9/08; 6/30/08; 8/4/08; 11/25/08; 2/17/09; 3/4/09; 7/13/09; 9/10/09; 9/15/09; 11/18/09; 12/4/09; and 12/28/09 .

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DETAILED ACTION

Status of Claims

1. Claims 77-96 are pending.
Claims 77-96 are rejected.
Claims 1-76 are cancelled.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

3. The information disclosure statements submitted on 8/18/06; 3/8/07; 6/7/07; 9/14/07; 10/10/07; 10/31/07; 3/5/08; 3/25/08; 4/4/08; 5/9/08; 6/30/08; 8/4/08; 11/25/08; 2/17/09; 3/4/09; 7/13/09; 9/10/09; 9/15/09; 11/18/09; 12/4/09; and 12/28/09 have been considered by the examiner.

Specification

4. Applicant is reminded of the proper content of an Abstract of the Disclosure.

In chemical patent abstracts for compounds or compositions, the general nature of the compound or composition should be given as well as its use, *e.g.*, "The compounds are of the class of alkyl benzene sulfonyl ureas, useful as oral anti-diabetics." Exemplification of a species could be illustrative of members of the class. For processes, the type reaction, reagents and process conditions should be stated, generally illustrated by a single example unless variations are necessary.

Complete revision of the content of the abstract is required on a separate sheet.

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Claim Objections

5. Claim 95 is objected to because of the following informalities: in line 1 epichlorohydrin is misspelled and in line 2 dichloropropanol is misspelled. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claim 87 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The disclosure does not provide a written description of a hydrogen chloride content which is higher than or equal to 30% by weight.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language

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is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 87 recites the broad recitation a hydrogen chloride content higher than or equal to 4% by weight, and the claim also recites preferably higher than or equal to 20% by weight, and most preferably higher than or equal to 30% by weight which is the narrower statement of the range/limitation.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 77, 85-88, 90, 91, and 94 are rejected under 35 U.S.C. 102(b) as being anticipated by GB 14,767.

GB 14,767 teaches producing glycerol-halogen-hydrins by reacting a fatty acid containing glycerol with hydrochloric acid (see entire disclosure).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

15. Claims 77-96 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 197308, Britton et al. (US 2,144,612), or Novelli (Anal. Farm. biochim) in view of Satoshi et al. (JP 62-242638) or DE 238341 or GB 14,767 and further in view of GB 984,633.

DE 197308 (see abstract) , Britton et al. (see col. 1, line 4 to col. 2, line 54), and Novelli (see abstract) each teach that it is known to produce dichlorohydrins of glycerol, i.e., dichloropropanols, by reacting glycerol with hydrogen chloride in the presence of an organic carboxylic acid. The reaction disclosed by Britton et al. is a continuous reaction (see col. 2, lines 1-43). Britton et al. further teach that dichlorohydrins are useful for preparing derivatives such as epichlorohydrin (see col. 2, lines 36-47).

DE 197308, Britton et al., and Novelli differ from the instant claims in that they do not teach the use of the specifically claimed organic carboxylic acids and esters thereof. However,

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DE 197308, Britton et al., and Novelli do not limit the organic carboxylic acids that can be used, therefore one having ordinary skill in the art would reasonably believe that any organic carboxylic acid would be suitable for use as the catalyst. Including the carboxylic acids such as adipic acid, caproic acid and the mono or polycarboxylic acids as disclosed by Satoshi et al. In particular since the carboxylic acids disclosed by Satoshi et al. have already been shown to be suitable for use as a catalyst for the reaction of an alcohol with hydrogen chloride. Further, DE 238341 teaches that esters of organic acids are also suitable for use as catalysts in the formation of dichlorohydrin from glycerol (see abstract). Therefore one having ordinary skill in the art at the time the invention was made would have also found the use of the claimed organic acid esters in the processes of DE 197308, Britton et al., and Novelli obvious, since DE 238341 teaches that esters of organic acids are also suitable for use as catalysts in the formation of dichlorohydrins from glycerol.

DE 197308, Britton et al., and Novelli differ from the instant claims in that they do not teach the use of an aqueous solution of hydrogen chloride.

GB 14,767 teaches that glycerol-halogen-hydrins can be obtained from either hydrochloric acid or hydrochloric acid gas (see page 1, lines 6-9).

It is known that hydrochloric acid is a solution of hydrogen chloride in water. It is usually produce in solutions up to 38% HCl. Bulk industrial-grade is usually 30% to 34% HCl.

One having ordinary skill in the art at the time the invention was made would have found it obvious to utilize hydrochloric acid, in particular one containing 30% to 34% HCl, in place of the hydrogen chloride disclosed by DE 197308, Britton et al., and Novelli, since GB 14,767 teach that glycerol-halogen-hydrins can be obtained from either hydrochloric acid or hydrochloric acid gas.

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Britton et al. further differ from the instant claims in that Britton et al. do not teach producing epoxy resins from the epichlorohydrin.

GB 984,633 teach that epoxy resins may be obtained by action of epichlorohydrin on a phenol having at least two hydroxyl groups (see col. 1, lines 19-24).

One having ordinary skill in the art at the time the invention was made would have found it obvious that the epichlorohydrin disclosed by Britton et al. could be used to obtain an epoxy resin, since GB 984,633 teach that epoxy resins may be obtained by action of epichlorohydrin on a phenol.

Double Patenting

16. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

17. Claims 77-96 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No.

12/502,342. Although the conflicting claims are not identical, they are not patentably distinct from each other because one having ordinary skill in the art at the time the invention was made

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would have found it obvious utilize a reactor made out of one of the materials disclosed in copending Application No. 12/502,342, since these materials are known to be inert to corrosive substances such as hydrochloric acid and thus would allow the reaction to proceed without contamination to the reactant product from the reaction vessel.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rosalynd Keys whose telephone number is (571)272-0639. The examiner can normally be reached on M-F 5:30 am-7:30 am and 9:15 am-3:15 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Sullivan can be reached on 571-272-0779. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Rosalynd Keys/
Primary Examiner, Art Unit 1621

February 26, 2010